



# **Economic Impact Analysis for Proposed Comprehensive Procurement Guideline III**

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This document presents the Economic Impact Analysis for the proposed Comprehensive Guideline for Procurement of Products Containing Recovered Materials III, henceforth, the Comprehensive Procurement Guideline III or CPG III. The document presents the following information: (1) EPA analytical requirements under Executive Order 12866, (2) EPA requirements under the Unfunded Mandates Reform Act of 1995, (3) background information on the regulations governing the CPG, CPG II, and CPG III, (4) general provisions of CPG III, (5) summary of benefits, (6) summary of costs, (7) universe of entities affected by the rule, (8) cost analysis methodology, (9) discussion of price differential between recycled and virgin products, (10) Regulatory Flexibility Analysis, and (11) limitations of the analysis.

## I. REQUIREMENTS UNDER EXECUTIVE ORDER 12866

Executive Order 12866 (54 FR 51735, October 4, 1993) requires Federal agencies to determine whether a regulatory action is "significant." The Order defines a "significant" regulatory action as one that is likely to result in a rule that may: (1) have an annual effect on the economy of \$100 million or more or adversely affect, in a material way, the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities; (2) create serious inconsistency or otherwise interfere with an action taken or planned by another agency; (3) materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients; or (4) raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

EPA estimates that the costs associated with the CPG III are below the \$100 million threshold. However, EPA believes that the CPG III may raise policy issues and, therefore, is considering it a significant regulatory action. To enable the Agency to evaluate the potential impact of the CPG III, EPA conducted the Economic Impact Analysis (EIA), discussed below.

## II. UNFUNDED MANDATES

Under Section 202 of the Unfunded Mandates Reform Act of 1995, signed into law on March 22, 1995, EPA must prepare a statement to accompany any rule where the estimated costs to State, local, or tribal governments in the aggregate, or to the private sector, will be \$100 million or more in any one year. Under Section 205, EPA must select the most cost-effective and least burdensome alternative that achieves the objective of the rule and is consistent with statutory requirements. Section 203 requires EPA to establish a plan for informing and advising any small governments that may be significantly impacted by the rule.

EPA has determined that the CPG III does not include a Federal mandate that may result in estimated annualized costs of \$100 million or more to either State, local, or tribal governments in the aggregate, or to the private sector.

### III. BACKGROUND

Section 6002(e) of the Resource Conservation and Recovery Act of 1976 (RCRA) requires EPA to designate items that are or can be made with recovered materials and to recommend practices for the procurement of designated items by procuring agencies. Section 6002 further requires that, once EPA designates an item, any procuring agency that purchases \$10,000 or more of that item with appropriated Federal funds must develop an affirmative procurement program to assure that the designated item is purchased with the highest percentage of recovered materials practicable. RCRA section 1004(17) defines a procuring agency as "any Federal agency, or any State agency or agency of a political subdivision of a State which is using appropriated Federal funds for such procurement, or any person contracting with any such agency with respect to work performed under such contract."

Executive Order 12873 sets forth procedures for EPA to follow in implementing RCRA section 6002(e). The Executive Order requires EPA to designate items in a Comprehensive Procurement Guideline (CPG) and to recommend procurement practices in a related Recovered Materials Advisory Notice (RMAN). The Executive Order also requires EPA to designate additional items annually. Accordingly, EPA issued CPG I in 1995 (60 FR 21370, codified at 40 CFR Part 247). In CPG I, EPA designated 19 items made with recovered materials. EPA also consolidated five earlier guidelines into CPG I. Additionally, CPG I incorporated the general affirmative procurement and specification provisions from RCRA section 6002. Concurrently, EPA published RMAN I, which recommended recovered materials content ranges within which the designated items are available and also provided recommendations for meeting the affirmative procurement and specification revision provisions. In 1997, EPA issued CPG II (62 FR 60962, November 13, 1997) and published RMAN II (62 FR 60976, November 13, 1997). CPG II designates an additional 12 items.

This Economic Impact Analysis provides estimated economic impacts on Federal, State, and local governments and private contractors for the 19 items EPA is proposing for designation in CPG III.

### IV. GENERAL PROVISIONS OF CPG III

CPG III proposes 19 new items that are or can be made with recovered materials. These items are organized under the following five categories:

- ! Construction Products -- nylon carpet with recycled content backing, carpet cushion, flowable fill, and railroad grade crossing surfaces;
- ! Park and Recreation Products -- outdoor furniture and playground equipment;
- ! Landscaping Products -- plastic lumber landscaping timbers and posts and food waste compost;
- ! Non-Paper Office Products -- solid plastic binders, plastic clipboards, plastic file folders, plastic clip portfolios, and plastic presentation folders; and
- ! Miscellaneous Products -- absorbents, industrial drums, awards and plaques, mats, signage, and strapping.

As a result of CPG III, procuring agencies would be required to perform several activities. For purposes of this analysis, EPA is dividing these activities as follows: rule review and implementation; estimation, certification, and verification; and, for Federal agencies, recordkeeping and reporting. The rule review and implementation subsection is further subdivided into three activities, including initial review; policy development, distribution, and implementation; and specification revision. These requirements are discussed in further detail in Section VIII.

## V. SUMMARY OF BENEFITS

EPA anticipates that CPG III will result in increased opportunities for recycling and waste prevention. Waste prevention can reduce the nation's reliance on natural resources by reducing the amount of materials used in making products. This may result in a commensurate reduction in energy use and in the generation and release of air and water pollutants associated with manufacturing. Additionally, waste prevention leads to a reduction in the environmental impacts of mining, harvesting, and other extraction processes.

Recycling can effect the more efficient use of natural resources. For many products, the use of recovered materials in manufacturing may result in lower energy and material input costs than when virgin raw materials are used. Aluminum recycling, for instance, can save up to 97 percent of the energy requirements for making new aluminum, as compared to the use of bauxite. Use of recovered materials can reduce the generation and release of air and water pollutants often associated with manufacturing (including air emissions that contribute to the level of "greenhouse gases" and ozone depletion). Air pollutant reductions of nearly 25 percent have been associated with the manufacture of glass from recovered materials, while reductions from the manufacture of steel and aluminum can be as high as 85 percent and 95 percent, respectively, when recovered materials are used. Additionally, water pollutant reductions in the manufacture of steel and aluminum can be as high as 75 percent and 95 percent, respectively, when recovered materials are used. Using recovered materials also reduces the environmental impacts of mining, harvesting, and other extraction of natural resources, while conserving non-renewable resources for future use. Recycling can also divert large amounts of materials from landfills, conserving increasingly valuable space for the management of materials that truly require disposal.

By purchasing products made with recovered materials, government agencies will increase opportunities for realizing these benefits. On a national and regional level, CPG III will result in expanding and strengthening markets for additional materials diverted or recovered through public and private collection programs, including plastics, food waste, steel, wood wastes, and tire rubber. Also, since many State and local governments, as well as private enterprises, reference EPA guidelines when purchasing designated items, CPG III will result in increased purchase of recycled products locally, regionally, and nationally.

Finally, purchase and use of recycled products by government agencies will also spur private sector development of new technologies, creating business and employment opportunities that enhance local, regional, and national economies. Technological innovation associated with the use of recovered materials translates into economic growth which makes American industry more competitive in the global economy.

## VI. SUMMARY OF COSTS

As shown in Table 1 below, EPA estimates that the annualized costs of CPG III range from \$6.5 to \$13 million, with costs being spread across all procuring agencies (i.e., Federal agencies, State and local agencies that use appropriated Federal funds to procure designated items, and contractors to all three). These costs are annualized over a 10-year period at a three percent discount rate. Because there is considerable uncertainty regarding several of the parameters that drive the costs, EPA conducted sensitivity analyses to identify the range of potential costs of CPG III. Thus, high-end and low-end estimates are presented along with the best estimate. The primary parameters affecting the range of cost estimates are the number of products each procuring agency is assumed to procure each year.

Table 1. -- Summary of Annualized Costs of CPG III to All Procuring Agencies

Procuring Agency	Total Annualized Costs (\$1000)	BEST ESTIMATE Total Annualized Costs (\$1000)
Federal Agencies	\$8,244- \$4,122	\$8,244
States	\$1,647 - \$823	\$1,647
Local Governments	\$2,993 - \$1,497	\$2,245
Contractors	\$115 - \$57	\$86
Total	\$12,999 - \$6,499	\$12,222

RCRA section 6002(g) requires the Office of Federal Procurement Policy (OFPP) to report to Congress every two years on the actions taken by Federal agencies to comply with RCRA section 6002. In developing this report, OFPP requests information and data from Federal agencies regarding their affirmative procurement programs and related activities. Table 2 below presents the estimated annualized costs to Federal agencies, including (1) specification revision and affirmative procurement program modification/implementation costs, and (2) recordkeeping and reporting costs. The recordkeeping and reporting costs presented below are the likely costs that would be incurred by Federal agencies to maintain and compile information for and complete the annual OFPP information request using the existing OFPP reporting format (i.e., the format used to collect information for fiscal years (FY) 1992 and 1993).

Table 2. -- Summary of Best Estimate Annualized Costs of CPG to Federal Agencies

Type of Federal Agency	Specification Revision and APP Costs (\$1000)	Recordkeeping and Reporting Costs (\$1000)	Total Annualized Costs (\$1000)
Civilian Agencies	\$1,012	\$1,739	\$2,751
Defense Agencies	\$2,052	\$3,441	\$5,493
Total	\$3,064	\$5,180	\$8,244

Many Federal agencies have stated that the current OFPP format is overly burdensome and costly to complete. To address these concerns, the Office of the Federal Environmental Executive (OFEE) has formed a workgroup which includes representatives from OFPP and several Federal agencies to examine methods of streamlining the current reporting format. For the FY94/95 Report to Congress, OFPP and OFEE requested data only from the top six agencies, which combined represent approximately 89 percent of annual Federal expenditures. These six agencies are the Department of Defense (DOD), Department of Energy (DOE), National Aeronautics and Space Administration (NASA), General Services Administration (GSA), Department of Transportation (DOT), and Department of Agriculture (USDA). In addition, GSA and GPO were asked to report agency paper purchases. For future reports, the OFEE workgroup is exploring automated reporting mechanisms in order to further the reporting costs to agencies.

Thus, EPA believes that the estimates of recordkeeping costs shown in Table 2 may overstate the expected costs from implementation of CPG III.

## VII. AFFECTED UNIVERSE

RCRA section 6002 applies to procuring agencies that use at least a portion of Federal funds to procure over \$10,000 worth of a designated product in a given year. Based on these criteria, EPA estimates that CPG III would apply to 35 Federal agencies, all 56 States and territories, and 1900 local governments. EPA's assumptions on the number of local entities that would be impacted were based on information regarding the amount of Federal funds that are dispersed to specific local governments. In addition, EPA assumed that between 200 and 1,000 contractors may be affected.

### A. Federal Agencies

RCRA section 6002 provides that Federal agencies that procure at least \$10,000 annually of a designated item in a given year are subject to the affirmative procurement requirements. For purposes of this analysis, EPA assumed that 35 agencies would be affected. EPA based this assumption on the amount of contract money spent per annum by each Executive agency, as reported in the Federal Procurement Data System (FPDS). The FPDS tracks Federal contract actions and dollars by department and agency. The Federal Procurement Report for Fiscal Year 92 lists 62 agencies in the Executive branch. Of these agencies, 35 spent more than \$10 million on contracts in 1992. Of the remaining agencies, 26 spent less than \$2 million.

In developing its assumption for the number for Federal specification-writing agencies, EPA assumed that 11 of the 35 agencies would actually write specifications for one of more of the designated items. A list of Federal specification-writing agencies is presented in Table 3 below.

Table 3. -- Federal Specification-Writing Agencies Potentially Affected

Product Category	Agencies Potentially Affected	Total Number of Agencies Potentially Affected
Construction Products	GSA, DoD, DOI, HUD, EPA, DOT, NASA, DOE, DVA, TVA	10
Park and Recreation Products	GSA, DOI, DoD, USDA	4
Landscaping Products	GSA, DOI, DoD, DOT, USDA	5
Non-Paper Office Products	GSA	1
Miscellaneous Products	DoD [GSA, DOT]	1 [3]

#### B. State Governments

RCRA section 6002 provides that State agencies that receive appropriated Federal funds and that use these funds to procure designated items in quantities of \$10,000 or more in a given year are subject to the CPG, CPG II, and CPG III. RCRA section 1004(31) defines a "State" to include all 50 States, the District of Columbia, the Commonwealth of Puerto Rico, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, and the Virgin Islands.

For purposes of this analysis, EPA assumed that 56 State and territorial governments would be affected, the full universe of State and territorial governments. EPA does not have information as to whether all of these states use appropriated Federal funds to purchase more than \$10,000 of one or more items designated in CPG III. However, for purposes of this analysis, EPA assumed that all 56 State and territorial governments would procure at least some of the 19 designated items in quantities costing at least \$10,000 per year.

#### C. Local Governments

RCRA section 6002 provides that local agencies that receive federal funds and that use these funds to procure designated items in quantities of \$10,000 or more annually are subject to CPG III. For purposes of this analysis, EPA assumed that 1900 local governments would be affected. Because EPA does not have direct information to indicate the number of local governments that currently would fit this criteria, the Agency based its assumption on the amount of Federal funds dispersed to local governments, as reported in the Consolidated Federal Funds Report for Fiscal Year 1992.



The Consolidated Federal Funds Report provides information on the distribution of Federal funds. The report lists that 1900 local governments received over \$10 million in Federal assistance funding in fiscal year 1992. Of the remaining local governments, 3,125 received \$1 million or less in Federal funds. For purposes of this analysis, EPA assumed that the 1900 local governments receiving over \$10 million would procure at least some of the 19 designated items in quantities of more than \$10,000 annually. EPA recognizes that this estimate may over-estimate or under-estimate the number of governments actually affected.

#### D. Contractors

RCRA section 6002 provides that contractors to Federal agencies, or to State or local agencies that use appropriated Federal funds to procure a designated item, purchase that designated item with recovered materials content when purchasing \$10,000 or more of that item in a given year as part of fulfilling their contractual requirements. EPA believes that there will be a minor cost to these contractors as a result of CPG III. However, EPA believes it is appropriate to allocate some contractor costs. Therefore, EPA assumed that 1,000 contractors would be affected. Since the number of designated items a contractor would purchase in any given year is also uncertain, EPA assumed a range of items per contractor of two items to four items, with three being the best estimate.

### VIII. COST ANALYSIS METHODOLOGY

This section discusses EPA's methodology for developing its cost estimates for CPG III. In estimating costs, EPA assumed an average loaded cost of \$35 per labor hour, which represents a mid-level specialist, a GS-12 grade for the Federal government.<sup>1</sup> EPA derived this estimate based on standard labor rates cited in past EPA Information Collection Requests (ICR). Subsection A discusses the general methodology for estimating costs. Subsection B discusses categories of costs, in general, that are expected to be incurred by procuring agencies.

#### A. General Methodology

Once EPA designates an item, each procuring agency is required to establish an affirmative procurement program within one year of the item designation. RCRA section 6002(i) requires that an affirmative procurement program contain the following four elements: a recovered materials preference program; a promotion program; a program for requiring vendors to estimate, certify, and, where appropriate, reasonably verify the recovered materials contained in their product; and a program to monitor and annually review the effectiveness of the affirmative procurement program. In addition, RCRA section 6002(d)(2) requires Federal agencies responsible for drafting or reviewing specifications to revise their specifications to require the use of recovered materials to the maximum extent practicable. These revisions must be completed within one year of the final designation of an item.

In CPG I, EPA recommended that each procuring agency establish one overall affirmative procurement program that allows for the integration of new items as they are designated. According to the information provided in the FY 93 affirmative procurement program status reports submitted to

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<sup>1</sup>EPA estimated the labor rate using a GS-12 (\$47,066) and a government overhead factor of 1.6.

OFPP, Federal agencies are already following this approach for the previously-designated items. For the items designated in CPG III, EPA anticipates that Federal and other procuring agencies will continue this practice and simply incorporate the newly-designated items into their existing affirmative procurement programs. Since most procuring agencies already have established affirmative procurement programs, EPA is not attributing the full costs associated with establishing these programs to CPG III. Rather, EPA believes that procuring agencies will revise certain elements of their existing affirmative procurement programs, which may cause them to incur additional costs.

As stated in Section VII, EPA assumed that 35 Federal agencies, all 56 States and territories, 1900 local governments, and 1000 contractors would be affected by CPG III. EPA received detailed cost estimates from six Federal agencies who commented on the proposed cost estimates for CPG I. These estimates included the likely costs of amending these agencies' existing affirmative procurement programs to include the newly-designated items.

In developing its estimates for the potential impact of CPG III on Federal agencies, EPA again relied on the information submitted by these six agencies. EPA then used this information in estimating costs to the remaining 29 Federal agencies. EPA's methodology for developing these estimates is presented in the individual cost category discussions below. For some cost categories, EPA based its estimates for the remaining 29 Federal agencies on population data. In doing so, EPA determined the average number of employees in each of the 29 remaining agencies is about 42,800 employees.

A few States commented that EPA's proposed estimates of the costs of implementing the "buy recycled" requirements of CPG I were understated. However, none of these State agencies provided information on their likely costs or information that would enable EPA to assess the unreasonableness of the estimates made at proposal. EPA became convinced in its discussions with Federal agencies that States would indeed incur higher costs than EPA's proposed estimates. Therefore, EPA relied on the information submitted by the Federal agencies to estimate costs likely to be incurred by State and local governments. In developing its estimates for State governments, EPA assumed that, for most cost categories, each State would incur costs similar to each Federal agency because each State would have to conduct activities similar to those required of Federal agencies. The exceptions are recordkeeping and reporting and specification revision. There is no statutory requirement for States to report their purchases of designated items or to revise their specifications to include recovered materials content requirements. However, EPA believes that, for some items, State governments will need to revise their specifications in order to purchase the CPG III items and has allocated costs to State governments for this activity.

During development of CPG I, EPA did not receive comments regarding its proposed estimates of local government costs for implementation. However, EPA believed it was appropriate to revise its cost estimates for local governments based on information received from and discussions with Federal agencies. For this reason, EPA redefined its methodology for estimating costs to local governments in developing the final EIA for CPG I. EPA again uses this redefined methodology for local governments, as discussed below, for CPG III.

During development of CPG I, EPA also did not receive comments regarding its estimates of contractor costs. EPA reviewed the methodology it used to develop cost estimates for contractors presented in the technical background document for CPG I and concluded that the affirmative procurement program modification and verification activities were appropriately identified. For this reason, EPA's methodology for estimating contractor costs remains generally unchanged from that used for CPG I.

## B. Cost Components

EPA is dividing costs to procuring agencies into three major subsections. These subsections relate to the affirmative procurement program requirements of RCRA section 6002(i). They are (1) rule review and implementation; (2) estimation, certification, and verification; and (3) recordkeeping and reporting. A summary of each requirement is presented below.

Some cost components (e.g., initial review) are incurred in the first year only, while others (e.g., verification and recordkeeping and reporting) are incurred on an annual basis. In presenting the total cost estimates for CPG III, all costs have been annualized over a 10-year period at a three percent discount rate. Formulas presented below demonstrate EPA's methodology for developing best estimates for each procuring agency. Details on the sensitivity analyses conducted are in Subsection 4 below.

Cost estimates to procuring agencies are presented in the following appendices to this document: Federal agencies - Appendix 1; State governments - Appendix 2; local governments - Appendix 3; and contractors - Appendix 4.

### 1. Rule Review and Implementation

Rule review and implementation activities include reading and assessing CPG III; modifying an agency's existing affirmative procurement program; incorporating new requirements into existing agency policy documents; and executing these new policies. In presenting costs related to these activities, EPA further divided the rule review and implementation subsection into four areas: (a) initial review; (b) policy development, distribution, and implementation; (c) training; and (d) specification revision.

#### a. Initial Review

Initial review activities include reading CPG III and developing a strategy for implementing its requirements. EPA estimates that total costs to procuring agencies to complete their initial review would be \$870,000. These costs are one-time costs and would be incurred in the first year only. Costs presented are the incremental costs of developing an implementation strategy for the newly-designated items only. Costs to develop an overall procurement guideline implementation strategy for all guideline items, including previously-designated items, are not allocated to CPG III. EPA's estimates for procuring agencies to complete initial review activities are as follows: Federal agencies - \$341,000 and State governments - \$529,000. Costs to local governments for initial review are included in the costs for policy development, distribution, and implementation presented in Subsection 1.b below.

(i) Federal Agency Costs

EPA assumed that all 35 Federal agencies would incur costs for initial review. For the six agencies that provided data during the development of CPG I, EPA estimates that total initial review costs would be \$67,000. For the remaining 29 agencies, EPA estimates \$274,000 in total initial review costs. To estimate costs for the remaining 29 Federal agencies, EPA developed the following formula:

270 hours per agency x 29 agencies x labor rate \$35 per hour.

The number of hours per agency was developed by averaging the hourly estimates submitted by the Federal agencies that provided data during the development of CPG I.

(ii) State Government Costs

EPA assumed that all 56 State governments would incur costs for initial review. EPA used the following formula in developing initial review costs to State governments:

(Total costs of \$274,000 for non-reporting Federal agencies / 29 non-reporting Federal agencies) x 56 State governments = \$529,000.

(iii) Local Government Costs

Costs to local governments for initial review are included in the costs for policy development, distribution, and implementation presented in Subsection 1.b below.

(iv) Contractor Costs

For contractors and vendors, EPA anticipates that the initial review costs are negligible since affected government agencies would include requirements in their solicitations and contract documents for procurement of newly-designated items. Contractors would review those requirements while reviewing all other solicitation requirements.

b. Policy Development, Distribution, and Implementation

Policy development, distribution, and implementation activities include (1) modifying an agency's affirmative procurement program; (2) developing and distributing policies implementing CPG III to affected activities; and (3) incorporating requirements to purchase designated items into existing agency documents.

EPA estimates that total costs to procuring agencies for policy development, distribution, and implementation in the first year would be \$4.7 million. These costs are one-time costs and would be incurred in the first year only. These costs are the incremental costs of modifying the agency's existing affirmative procurement program and developing and incorporating requirements and procedures for purchasing the newly-designated items only. Costs to develop an agency's overall affirmative procurement program and general procurement guideline implementing policies are not allocated to

CPG III. EPA's estimates for procuring agencies to complete policy development, distribution, and implementation activities are as follows: Federal agencies -- \$1.1 million; State governments -- \$579,000; local governments -- \$2.8 million; and contractors -- \$210,000.

(i) Federal Agency Costs

EPA assumed that all 35 Federal agencies would incur costs for policy development, distribution, and implementation. For the six agencies that provided data during the development of CPG I, EPA estimates that the total costs for these activities would be \$797,000. For the remaining 29 agencies, EPA estimates \$300,000 in total policy development, distribution, and implementation costs. Information provided by Federal agencies indicated that the estimated costs of this activity tended to increase with the size and the number of field components characteristic of the agency. To estimate costs for the remaining 29 Federal agencies, EPA developed the following formula:

$$0.0069 \text{ hours per employee} \times 29 \text{ agencies} \times \text{Average of } 42,800 \text{ employees per agency} \times \text{labor rate of } \$35 \text{ per hour.}$$

This component uses agency population as a surrogate for size and complexity of Federal agencies. The number of hours per employee was developed by adding the hourly estimates submitted by the Federal agencies. This total was then divided by the total number of employees from those agencies.

(ii) State Government Costs

EPA assumed that all 56 State governments would incur costs for policy development, distribution, and implementation. EPA used the following formula in developing policy development, distribution, and implementation costs to State governments:

$$(\text{Total costs of } \$300,000 \text{ for non-reporting Federal agencies} / 29 \text{ non-reporting Federal agencies}) \times 56 \text{ State governments} = \$579,000.$$

(iii) Local Government Costs

EPA assumed that all 1900 local governments would incur costs for initial review, policy development, distribution, and implementation, and specification review. In calculating these costs for local governments, EPA assumed that a national organization representing local governments would prepare a CPG III implementation package for use by local government officials in implementing the CPG III requirements. This CPG III implementation package would contain a synopsis of the requirements of CPG III, sample policies and affirmative procurement programs, and references to national and other specifications that would facilitate the implementation of the CPG III requirements by local governments. EPA estimated costs for preparing this package using the following formula:

$$[270 \text{ hours for initial review} \times \text{labor rate of } \$35 \text{ per hour}] + [280 \text{ hours for specification revisions} \times 10 \text{ items} \times \text{labor rate of } \$35 \text{ per hour}] = \$107,450.$$

Currently, under a grant from EPA, the U.S. Conference of Mayors provides information to assist local government officials in purchasing the previously-designated items. In the short-term, EPA will provide the U.S. Conference of Mayors with the necessary materials to enable it to provide its constituents with information on the newly-designated items. EPA will also work with other national organizations representing local officials in preparing information packages for their members. EPA also may work through a grantee to develop such a package and make it available to local officials through its RCRA Hotline. Should EPA provide the funding for developing this information package, EPA estimates that the costs presented in this section could be reduced.

In addition to the above costs, EPA estimates an additional 40 hours per local government will be required to tailor this package to meet the needs of their local agencies. In estimating these costs, EPA used the following formula:

$$40 \text{ hours per local government} \times 1900 \text{ local governments} \times \text{labor rate of } \$35 \text{ per hour} = \$2,660,000.$$

(iv) Contractor Costs

EPA assumed that all 1000 contractors would incur costs for policy development, distribution, and implementation. EPA estimates that each contractor would require two hours per item for this task. EPA used the following formula in calculating policy development, distribution, and implementation costs to contractors:

$$2 \text{ hours per contractor} \times 1000 \text{ contractors} \times 3 \text{ items} \times \text{labor rate of } \$35 \text{ per hour} = \$210,000.$$

c. Training

Training activities include training affected personnel on new policies and procedures developed to implement CPG III. EPA estimates that total costs to procuring agencies to conduct training would be \$29.0 million. These costs are one-time costs. Based on discussions with Federal agencies, EPA believes that training would likely be conducted over a period of five years. These costs are the incremental costs of training appropriate personnel on the newly-designated items only. Costs to train personnel on overall affirmative procurement policies and procedures or pollution prevention programs are not allocated to the CPG III. EPA's estimates for procuring agencies to complete training activities are as follows: Federal agencies -- \$15.2 million; State governments -- \$7.3 million; and local governments -- \$6.7 million.

(i) Federal Agency Costs

EPA assumed that all 35 agencies would incur costs for training. For the six agencies that provided data during the development of CPG I, EPA estimated that the total costs for these activities were \$10.8 million for 19 items. For CPG III with 19 items, EPA estimates the cost at \$10.8 million. For the remaining 29 agencies, EPA estimates \$3.8 million in total training costs. Information provided by Federal agencies indicated that the estimated costs of this activity tended to increase with the size of the agency. To estimate costs for the remaining 29 Federal agencies, EPA developed the following formula:

0.0046 hours per employee per item x 29 agencies x Average number of 42,800 employees per agency x 19 items x labor rate of \$35.

This component used agency population as a surrogate for size and complexity of Federal agencies. The number of hours per employee per item was developed by adding the hourly estimates submitted by the Federal agencies. This total was then divided by the total number of employees from those agencies, and again divided by 21 (number of items proposed for designation in the CPG I).

(ii) State Government Costs

EPA assumed that all 56 State governments would incur costs for training. EPA used the following formula in developing training costs to State governments:

(Total costs of \$3.8 million for non-reporting Federal agencies / 29 non-reporting Federal agencies) x 56 State governments = \$7.3 million.

(iii) Local Government Costs

EPA assumed that local governments would incur costs for training. In calculating these costs for local governments, EPA assumed that one official in each of five departments within each local government would require training. EPA estimated that each official would require approximately two hours of training per designated item. Therefore, EPA used the following formula in calculating training costs for local governments:

2 hours per item x 1900 local governments x 5 departments x 1 local official per department x 10 items x labor rate of \$35 per hour = \$6.7 million.

(iv) Contractor Costs

For contractors and vendors, EPA anticipates that the training costs are negligible since affected government agencies would include requirements in their solicitations and contract documents for procurement of designated items. Contractors would review those requirements while reviewing all other solicitation requirements.

d. Specification revision (including testing and evaluation)

Specification revision activities include reviewing and revising agency specifications to incorporate recovered materials content requirements. This includes (1) identifying and locating affected specifications for items designated in CPG III; (2) conducting performance reviews, in advance of an actual procurement, to determine if products containing recovered materials meet existing performance requirements (i.e., any costs incurred to compare recycled product performance to current performance requirements (specifications), including any necessary testing and evaluation); (3) revising specification provisions, as appropriate; and (4) completing the revision process.

EPA estimates that total costs to procuring agencies to review their specifications and incorporate the requirements of CPG III would be \$697,000. These costs are one-time costs only. Based on discussions with Federal agencies, EPA believes that specification revision would be conducted over a period of five years. These costs are the incremental costs of reviewing and revising specifications for the newly-designated items only. Costs to review and revise specifications to remove requirements specifying virgin materials only or excluding the use of recovered materials are not allocated to CPG III. Pursuant to RCRA section 6002(d)(1), these revisions were to have been completed prior to issuance of CPG I (and, of course, CPG II and CPG III). As recommended by Federal agencies that provided comments on the proposed CPG I, costs to qualify vendors were not allocated to the CPG, CPG II, or CPG III. EPA's estimates for procuring agencies to complete specification revision activities are as follows: Federal agencies \$1,893,000 and State governments - \$2,013,000.

(i) Federal Agency Costs

Of the 35 Federal agencies that could be significantly impacted by the CPG III, EPA estimates that 11 agencies will revise their specifications to incorporate recovered materials content requirements. For the six agencies that provided data during the development of CPG I, EPA estimates that total specification revision costs would be \$851,000. For the remaining 29 agencies, EPA estimates \$1,042,000 in total specification revision costs, based on the following assumptions.

For most product categories, EPA estimates the potential time for a Federal specification-writing agency to review and revise its product specifications would average 280 hours per product based on actual specification revision activities performed by one of the agencies commenting during the development of CPG I. For road related construction products, the estimate is about 2,000 hours per product for review and revise product specifications.

Table 4 below presents the potential costs to Federal agencies for reviewing and revising specifications.



Table 4. -- Potential Specification Revisions for All Federal Agencies

Product Category	Number of Items	Total Number of Agencies Potentially Affected	Specification Review and Revision Time per Item (In Hours)	Total Category Costs
Construction Products (non-road)	2	10	283	\$199,000
Construction Products (road)	2	10	2003	\$1,406,000
Park and Recreation Products	2	4	283	\$79,000
Landscaping Products	2	5	283	\$99,000
Non-Paper Office Products	5	1	283	\$50,000
Miscellaneous Products	6	1	283	\$60,000

Costs in Table 4 attributable to reporting Federal agencies total \$851,000 while costs attributable to non-reporting Federal Agencies (6 agencies for construction products, 2 agencies for park and recreation products, and 2 agencies for landscaping products) total \$1,042,000.

(ii) State Government Costs

Although the statute does not require State governments to review and revise their specifications for designated items, EPA believes that for some items, State governments will need to revise their specifications in order to purchase CPG III items. EPA anticipates that these costs would be the incremental cost of incorporating these additional requirements into existing documents where procurement of designated items is a concern.

EPA assumed that all 56 State governments would incur costs for specification revision. EPA used the following formula in developing specification revision costs to State governments:

(Total costs of \$1,042,000 for non-reporting Federal agencies / 29 non-reporting Federal agencies) x 56 State governments = \$2,013,000.

(iii) Local Government Costs

As with State governments, the statute does not require local governments to review and revise specifications for designated items. However, EPA believes that local governments may need to revise some specifications in order to purchase CPG III items, and, as explained previously, included these costs in the cost estimates for policy development, distribution, and implementation presented in Subsection 1.b above.

(iv) Contractor Costs

The statute does not require contractors to review and revise specifications. Therefore, EPA did not estimate contractor costs to perform these activities. For contractors and vendors, EPA anticipates that the specification revision costs are negligible since affected government agencies would include requirements in their solicitations and contract documents for procurement of newly-designated items. Contractors would review those requirements while reviewing all other solicitation requirements.

2. Estimation, Certification, and Verification

RCRA section 6002(i)(C)(2) requires procuring agencies to establish procedures for estimating, certifying, and, where appropriate, verifying the amount of recovered materials utilized in the performance of a contract. RCRA section 6002(c)(3) further provides "the contracting officer shall require that vendors (A) certify that the percentage of recovered materials to be used in the performance of the contract will be at least the amount required by applicable specifications or other contractual requirements and (B) estimate the percentage of the total materials utilized for the performance of the contract which is recovered materials."

a. Estimation and Certification

Section 903 of Executive Order 12873 requires the elements of an affirmative procurement program to be included into the Federal Acquisition Regulation, including guidance on agency programs for estimation and certification. Therefore, EPA does not anticipate that there would be a cost to Federal agencies for establishing procedures for estimating and certifying the amount of recovered materials utilized in the performance of a contract. In addition, EPA anticipates that State and local governments and contractors would also adopt the estimation and certification procedures established in the Federal Acquisition Regulation and, therefore, would incur minimal incremental costs in implementing this requirement. The changes to the Federal Acquisition Regulation were published in the *Federal Register* on August 22, 1997 (62 FR 44809).

The actual costs for performing this activity would be the costs incurred by vendors to provide the estimates and certifications required in solicitations and contract documents, which, as described below, EPA believes would be minimal. The CPG estimation and certification provisions require that vendors estimate the amount of recovered materials used to manufacture a designated item and certify that their product meets or exceeds the procuring agency's minimum recovered materials content standard as specified in a solicitation. Vendors that respond to solicitations and/or are awarded contracts that require them to supply designated items containing recovered materials incur an incremental cost of completing the additional information and documentation required in the solicitation or contract document. Because

vendors currently must certify that their products meet all of the other Federal specifications and requirements contained in a bid package or contract document, EPA anticipates that the incremental effort to certify this one additional requirement would be minimal. In addition, the potential impact of the estimation requirement is expected to be minimal because EPA anticipates that vendors would be knowledgeable about the recovered materials content of their products. Therefore, EPA believes that the costs for vendors to estimate and certify the recovered materials content of their products is negligible. Vendors costs were not included in this analysis.

b. Verification

EPA anticipates that each procuring agency, when establishing its verification procedures, will adopt "reasonable procedures," as specified in the statute, such as requesting written documentation from contractors or relying on submission of third party certifications that state the percentage of recovered materials contained in a designated item. It is possible that a procuring agency could decide to visit a manufacturer to verify the recovered materials content reported in its product. EPA believes that, based on the actions taken by procuring agencies with regard to the existing procurement guidelines, this would occur infrequently, if at all, and, therefore, has not included inspection costs in its estimates.

Federal agencies reported that their verification activities would generally occur in three year cycles. EPA estimates that the total costs to procuring agencies to comply with the verification requirements of CPG III would be \$12 million every three years. These costs include the costs incurred by a procuring agency to reasonably verify the amount of recovered materials utilized in the performance of its contracts. These costs are the incremental costs of verifying compliance with recovered materials content requirements in contracts for newly-designated items only. Costs to verify overall contract compliance are not allocated to CPG III. EPA's estimates for procuring agencies to complete verification activities are as follows: Federal agencies -- \$3.4 million; State governments -- \$1.8 million; local governments -- \$6.7 million; and contractors -- \$210,000. Verification costs would be incurred starting in Year 2.

(i) Federal Agencies Costs

EPA assumed that all 35 Federal agencies would incur verification costs. For the 6 agencies that provided data during the development of CPG I, EPA estimated that the annual costs for these activities were \$2.5 million every three years. For CPG III, EPA also estimated costs for the six reporting agencies at \$2.5 million. For the remaining 29 agencies, EPA estimates verification costs would be \$908,000 every three years. Information provided by Federal agencies indicated that the estimated costs of this activity tended to increase with the size of the agency. EPA used the following formula in developing verification costs for the remaining 29 Federal agencies:

0.0011 hours per employee per item every three years x 29 agencies x Average of 42,800 employees per agency x 19 items x labor rate of \$35 per hour = \$908,000 every three years.

This component uses agency population as a surrogate for size and complexity of Federal agencies. The number of hours per employee per item was developed by adding the hourly estimates submitted by the six Federal agencies. This total was then divided by the total number of employees from those agencies, and again divided by 21 (number of items proposed for designation in CPG I).

(ii) State Government Costs

EPA assumed that all 56 State governments would incur verification costs. EPA used the following formula in developing verification costs to State governments:

(Costs of \$908,000 every three years for non-reporting Federal agencies / 29 non-reporting Federal agencies) x 56 State governments = \$1.8 million every three years.

(iii) Local Government Costs

EPA assumed that local governments would incur verification costs. In calculating these costs for local governments, EPA assumed that local governments would complete their verification requirements by sampling. EPA assumed that each local government would sample one contract in each of five departments for each EPA-designated item every three years. EPA estimated that each contract would require approximately two hours to verify compliance with the CPG-related requirements of the contract. Therefore, EPA used the following formula in calculating verification costs to local governments:

2 hours per employee x 1900 local governments x 5 departments x 1 employee per department x 1 contract per department every three years x 10 items x labor rate of \$35 per hour = \$6.7 million every three years.

(iv) Contractor Costs

EPA assumed that contractors would incur verification costs. EPA estimates that each contractor would require two hours for this task and that verification would occur every three years, consistent with the three year cycle indicated by Federal agencies. EPA used the following formula in developing verification costs to contractors.

2 hours per contractor x 1000 contractors x 3 items every three years x labor rate of \$35 per hour = \$210,000 every three years.

3. Recordkeeping and Reporting

Recordkeeping and reporting requirements apply to Federal agencies only. Activities include obtaining or maintaining data on agency purchases of newly-designated items and annually reporting such data to OFPP and OFEE. As discussed in Section VI above, RCRA section 6002(g) requires OFPP to report to Congress every two years on the actions taken by Federal agencies to comply with RCRA section 6002. In developing this report, OFPP requests information and data from Federal agencies regarding their affirmative procurement programs and related activities. The recordkeeping and reporting costs presented below are the likely costs that would be incurred by Federal agencies to maintain and compile information for and complete the annual OFPP information request using the existing OFPP reporting format (i.e., the format used to collect information for fiscal years 1992 and 1993).

EPA estimates that annual costs to Federal agencies to perform recordkeeping and reporting activities would be \$5.2 million. These costs are annual costs and would be incurred starting in Year 2. These costs are the incremental costs of maintaining records and reporting on the items designated in CPG III only. Total costs to report on an agency's compliance with Executive Order 12873 or general requirements of RCRA section 6002 or total costs to report on an agency's overall affirmative procurement activities are not allocated to CPG III.

As discussed in Section VI above, OFEE has a workgroup to discuss ways to reduce the recordkeeping and reporting burden. The initial steps taken by OFEE and OFPP -- requiring reporting only by the six top purchasing agencies -- reduced the burden on most of the procuring agencies. Additional steps under consideration should further reduce the burden.

a. Federal Agency Costs

EPA assumed that all 35 agencies would incur recordkeeping and reporting costs. For the six agencies that provided data during the development of CPG I, EPA estimated that the annual costs for these activities were \$3.9 million. For CPG III, EPA also estimated costs for reporting agencies at \$3.9 million. For the remaining 29 agencies, EPA estimates \$1.3 million in annual recordkeeping and reporting costs. Information provided by Federal agencies indicated that the estimated costs of this activity tended to increase with the size of the agency. To estimate training costs for the remaining 29 Federal agencies, EPA used the following formula:

0.0016 hours per employee per item x 29 agencies x Average of 42,800 employees per agency x 19 items x labor rate of \$35 per hour.

This component uses agency population as a surrogate for size and complexity of Federal agencies. The number of hours per employee per item was developed by adding the hourly estimates submitted by the Federal agencies. This total was then divided by the total number of employees from those agencies, and again divided by 21 (number of items proposed for designation in CPG I).

b. State and Local Government and Contractor Costs

The statute does not require State and local governments or contractors to file reports on their purchases of products containing recovered materials. These entities, however, may be required to report on their compliance with all of the requirements of individual contracts and assistance agreements, perhaps including requirements to purchase designated items. Relative to the overall burden to report on compliance with all aspects of the contracts and assistance agreements, EPA anticipates that the incremental effort to report on compliance with the requirements to buy designated items would be negligible.

4. Sensitivity Analyses

Because there is some uncertainty regarding the number of items each Federal agency will procure, EPA conducted sensitivity analyses, as discussed below, to determine the impact on the cost results if it were assumed that procuring agencies purchased a range of items.

a. Federal Agencies

In its low-end estimate, EPA assumed that each Federal agency would procure an average of one-half (10) of the items annually. For the best and high-end estimate, EPA assumed that agencies would procure all 19 items annually. The sensitivity analysis results are as follows: best estimate -- \$8.2 million; high estimate -- \$8.2 million (best estimate used); and low estimate -- \$4.1 million.

b. State Governments

In its low-end estimate, EPA assumed that each State government would procure an average of one-half (10) of the items annually. For the best and high-end estimate, EPA assumed that State governments procured all 19 items annually. The sensitivity analysis results are as follows: best estimate -- \$1.6 million; high estimate -- \$1.6 million (best estimate used); and low estimate -- \$820,000.

c. Local Governments

Local governments would incur only a portion of the costs of Federal agencies. EPA assumed that not all local governments would procure all 19 items in a given year. Instead, EPA assumed that each local government would procure only one-half (10) of the items in any given year. For the sensitivity analysis, EPA assumed that local governments would procure one-third (6) or two-thirds (13) of the items in each year. The sensitivity analysis results are as follows: best estimate -- \$2.2 million; high estimate -- \$3.0 million; and low estimate -- \$1.5 million.

d. Contractors

EPA assumed that contractors would procure only one-sixth (3) of the designated items annually. For the sensitivity analyses, EPA assumed that contractors would procure one-twelfth (2) or one-fourth (4) of the items in each year. The sensitivity analysis results are as follows: best estimate - \$210,000; high estimate - \$280,000; and low estimate - \$140,000.

IX. PRODUCT COST

Another potential cost of CPG III is the possible price differential between an item made with recovered materials and an equivalent item manufactured using virgin materials. As discussed in the preamble to the CPG I *Federal Register* notice (60 FR 21380), relative prices of recycled products compared to prices of comparable virgin products vary. In many cases, recycled products may be less expensive than their virgin counterparts. In other cases, virgin products may have lower prices than recycled products. However, other factors can also affect the price of virgin products. For example, temporary fluctuations in the overall economy can create oversupplies of virgin products, leading to a decrease in prices for these items. Under RCRA section 6002(c), procuring agencies are not required to purchase a product containing recovered materials if it is only available at an unreasonable price. However, the decision to pay more or less for such a product is left to the procuring agency.

## X. REGULATORY FLEXIBILITY ANALYSIS

The primary purpose of the Regulatory Flexibility Analysis is to identify if there is an adverse impact to small businesses that are directly regulated by CPG III and to examine regulatory alternatives that fall within the scope of the statutory requirements that would reduce impacts to small businesses, small organizations, or small governmental jurisdictions subject to the regulation. The RCRA procurement requirements apply to procuring agencies that procure more than \$10,000 of a designated item. No exemption is included in the statute for small businesses. Therefore, EPA has decided that alternative regulatory approaches for small businesses are not appropriate for CPG III.

With regard to possible impacts to small businesses, there may be both positive and negative impacts to individual businesses. EPA anticipates that CPG III will provide additional opportunities for small recycling businesses to begin supplying recovered materials to manufacturers and products made from recovered materials to procuring agencies. In addition, other small businesses that do not directly contract with procuring agencies may be affected positively by the increased demand for recovered materials. These include small businesses involved in materials recovery programs and materials recycling. Municipalities that run recycling programs are also expected to benefit from the increased demand for certain recovered materials.

EPA is unable to determine the number of small businesses that may be adversely impacted by CPG III. It is possible that if a small business that currently supplies products to a procuring agency uses virgin materials only, CPG III may reduce its ability to compete for future contracts. However, CPG III will not affect existing purchase orders, nor will it preclude businesses from adapting their product lines to meet new specification or solicitation requirements for products containing recovered materials. Thus, many small businesses that market to procuring agencies have the option to adapt their product lines to meet specifications.

## XI. LIMITATIONS

As stated above, EPA did not have specific data from which to develop its cost estimates for State and local governments and contractors. Although several States commented during the development of CPG I that EPA's proposed estimates of the costs of implementing the CPG were understated, none of these commenters provided data supporting their comments. In addition, no comments were submitted by potentially-affected local governments or contractors. No data were submitted during the CPG II comment period, either.

Based on its discussions with Federal agencies, EPA determined that State and local governments would most likely incur higher costs than EPA's proposed estimates. Therefore, EPA relied on the information submitted by the Federal agencies, Census data, and, in some instances, EPA's own judgement, in adjusting its estimating factors in order to determine the potential costs of CPG III on State and local governments and contractors.

# APPENDIX 1. -- SUMMARY OF COSTS TO FEDERAL AGENCIES

Costs to Federal Agencies			
Requirement	Reporting Defense Agencies	Reporting Civilian Agencies	Remaining Agencies
Initial Review (First Year Only)	\$30,985	\$35,541	\$274,050
Policy Development, Distribution, and Implementation (First Year Only)	615,538	181,744	299,750
Training (Total Over First 5 Years Only)	10,611,120	228,335	3,796,831
Specification Revision (Total Over First 5 Years Only)	269,700	590,700	1,042,000
Verification (Total Every 3 Years Beginning in Year 2)	2,344,543	151,437	908,000
Recordkeeping and Reporting (Annual Beginning in Year 2)	3,441,144	418,124	1,321,000

## TOTAL ANNUALIZED COSTS WITHOUT RECORDKEEPING AND REPORTING

Defense Agencies - \$2,052,000  
Civilian Agencies - \$1,012,000

## TOTAL ANNUALIZED COSTS WITH RECORDKEEPING AND REPORTING

Defense Agencies - \$5,493,000  
Civilian Agencies - \$2,751,000

## SENSITIVITY ANALYSIS RESULTS INCLUDING RECORDKEEPING AND REPORTING

High Estimate - \$8,244,000  
Low Estimate - \$4,122,000  
Best Estimate - \$8,244,000



APPENDIX 2. -- SUMMARY OF COSTS TO STATE GOVERNMENTS

Costs to State Governments	
Requirement	Costs
Initial Review (First Year Only)	\$529,000
Policy Development, Distribution, and Implementation (First Year Only)	579,000
Training (Total Over First 5 Years Only)	7,332,000
Specification Revision (Total Over First 5 Years Only)	2,013,000
Verification (Total Every 3 Years Beginning in Year 2)	1,753,000

TOTAL ANNUALIZED COSTS - \$1,647,000

SENSITIVITY ANALYSIS RESULTS

High Estimate - \$1,647,000

Low Estimate - \$823,000

Best Estimate - \$1,647,000

### APPENDIX 3. -- SUMMARY OF COSTS TO LOCAL GOVERNMENTS

Costs to Local Governments	
Requirement	Costs
Initial Review, Policy Development, Distribution, and Implementation, and Specification Revision (First Year Only)	\$2,767,000
Training (Total Over First 5 Years Only)	6,650,000
Verification (Total Every Three Years Beginning in Year 2)	6,650,000

TOTAL ANNUALIZED COSTS - \$2,245,000

#### SENSITIVITY ANALYSIS RESULTS

High Estimate - \$2,993,000

Low Estimate - \$1,497,000

Best Estimate - \$2,245,000

#### APPENDIX 4. -- SUMMARY OF COSTS TO CONTRACTORS

Costs to Contractors	
Requirement	Costs
Policy Development, Distribution, and Implementation (First Year Only)	\$210,000
Verification (Total Every Three Years Beginning in Year 2)	\$210,000

TOTAL ANNUALIZED COSTS - \$86,000

#### SENSITIVITY ANALYSIS RESULTS

High Estimate - \$115,000

Low Estimate - \$57,000

Best Estimate - \$86,000